



STIC Search Report

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STIC Database Tracking Number: 10 / 705659

TO: Ben Sackey
Location: 5b31 / 5c18
Art Unit: 1626
Friday, January 06, 2006

Case Serial Number: 10 / 705659

From: Noble Jarrell
Location: Biotech-Chem Library
Rem 1B71
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Noble.jarrell@uspto.gov

Search Notes

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Noble

Scientific and Technical Information Center
SEARCH REQUEST FORM

Requester's Full Name: BEN SACK ETY Examiner #: 734 89 Date: 12/28/01
Art Unit: 1626 Phone Number: 2-0704 Serial Number: 10/1705,659
Location (Bldg/Room#): Ren 553 (Mailbox #): _____ Results Format Preferred (circle): PAPER DISK

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Compounds and Synthesis process

Inventors (please provide full names): William J. Begley

Earliest Priority Date: 11/10/03

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

A process for preparing 6-chloro-2,5-dicarbonamido phenol comprising chlorinating 2-alkyl-6-amino benzoxazole, then reacting to form 2-alkyl-6-amino-7-chlorobenzoxazole, reacting with an acid chloride and a base.

SEARCHED
INDEXED
FILED

STAFF USE ONLY

Searcher: Noble

Type of Search

NA Sequence (#)

AA Sequence (#)

Structure (#)

Bibliographic

Litigation

Fulltext

Other

Vendors and cost where applicable

STN Dialog

Questel/Orbit Lexis/Nexis

Westlaw WWW/Internet

In-house sequence systems

Commercial Oligomer Score/Length

Interference SPDI Encode/Transl

Other (specify)

Date Searcher Picked Up: 11/6/06

Date Completed: 11/6/06

Searcher Prep & Review Time: 10

Online Time: 30

=> b reg
FILE 'REGISTRY' ENTERED AT 08:52:39 ON 06 JAN 2006
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STRUCTURE FILE UPDATES: 4 JAN 2006 HIGHEST RN 871209-00-6
DICTIONARY FILE UPDATES: 4 JAN 2006 HIGHEST RN 871209-00-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

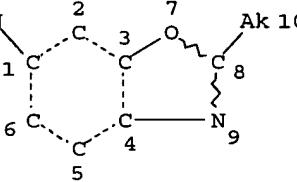
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*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMITS
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predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
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=> d que sta 110
L5 STR


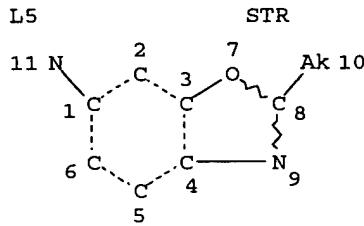
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE
L10 632 SEA FILE=REGISTRY SSS FUL LS

100.0% PROCESSED 4059 ITERATIONS 632 ANSWERS
SEARCH TIME: 00.00.01

=> d que sta 113



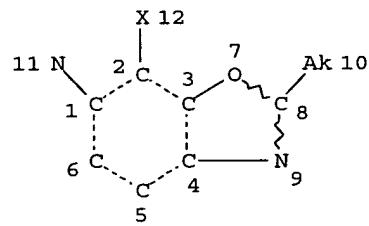
NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
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GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L10 632 SEA FILE=REGISTRY SSS FUL L5
L11 STR

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DEFAULT MLEVEL IS ATOM
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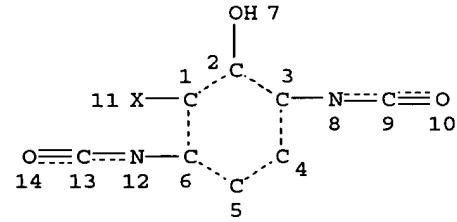
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NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L13 7 SEA FILE=REGISTRY SUB=L10 SSS FUL L11

100.0% PROCESSED 126 ITERATIONS
SEARCH TIME: 00.00.01

7 ANSWERS

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L14 STR

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE
L16 68 SEA FILE=REGISTRY SSS FUL L14

100.0% PROCESSED 3134 ITERATIONS 68 ANSWERS
SEARCH TIME: 00.00.01

=> b hcap
FILE 'HCAPLUS' ENTERED AT 08:52:55 ON 06 JAN 2006
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FILE COVERS 1907 - 6 Jan 2006 VOL 144 ISS 2
FILE LAST UPDATED: 4 Jan 2006 (20060104/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr 124 tot

L24 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:411078 HCAPLUS
DN 142:463458
ED Entered STN: 13 May 2005
TI Process for preparing 6-chloro-2,5-dicarbonamidophenol compounds
IN Begley, William J.
PA Eastman Kodak Company, USA
SO U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C07D-0263/52
 ICS C07C-0231/10
INCL 548217000; 564155000
CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US2005101784	A1	20050512	2003US-0705659	20031110
	WO2005047271	A1	20050526	2004WO-US36261	20041029
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK			

EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

PRAI 2003US-0705659 A 20031110

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 2005101784	ICM	C07D-0263/52
	ICS	C07C-0231/10
	INCL	548217000; 564155000
	IPCI	C07D0263-52 [ICM, 7]; C07C0231-10 [ICS, 7]
	NCL	548/217.000
	ECLA	C07C315/04; C07D263/56B
WO2005047271	IPCI	C07D0263-56 [ICM, 7]; C07C0317-22 [ICS, 7]
	ECLA	C07C315/04; C07D263/56B

AB Disclosed is a process for preparing a 6-chloro-2,5-dicarbonamidophenol compds. comprising a step employing a 2-alkyl-6-aminobenzoxazole to form a 2-alkyl-6-amino-7-chlorobenzoxazole in which the 2-alkyl group is unbranched at the α -carbon. It also provides intermediate compds. useful in the process. The process provides a simple and safe way to prepare 6-chloro-2,5-dicarbonamidophenol compds. in good yield. Thus, nitration of 5-chloro-2-methylbenzoxazole by HNO₃/H₂SO₄ at 20° gave 5-chloro-2-methyl-6-nitrobenzoxazole which was reduced over Raney nickel in THF at room temperature under H pressure of 50 psi to give 6-Amino-5-chloro-2-methylbenzoxazole (I). Chlorination of I by sulfonyl chloride in EtOAc for 1 h gave 6-amino-5,7-dichloro-2-methylbenzoxazole which was acylated by 2-[(4-dodecyloxyphenyl)sulfonyl]butanoyl chloride in pyridine/EtOAc/THF at 15° for 30 min to give 6-[(2-[(4-dodecyloxyphenyl)sulfonyl]butanoyl)amino]-5,7-dichloro-2-methylbenzoxazole (II). Hydrolysis of II in a mixture of concentrated HCl and THF at 65° for .apprx.3 h gave 6-amino-2,4-dichloro-3-[(2-[(4-dodecyloxyphenyl)sulfonyl]butanoyl)amino]phenol which was acylated by 3,4-dichlorobenzoyl chloride in pyridine/THF at room temperature for 30 min to give 2,4-dichloro-3-[(2-[(4-dodecyloxyphenyl)sulfonyl]butanoyl)amino]-6-(3,4-benzoylamino)phenol.

ST alkylaminochlorobenzoxazole prep intermediate chlorodicarbonamidophenol; chlorodicarbonamidophenol prep

IT 701-16-6, 5-Fluoro-2-methylbenzoxazole 3024-72-4, 3,4-Dichlorobenzoyl chloride 3282-30-2, Pivaloyl chloride 19219-99-9, 5-Chloro-2-methylbenzoxazole 851486-98-1, 2-[(4-Dodecyloxyphenyl)sulfonyl]butanoic acid

RL: RCT (Reactant); RACT (Reactant or reagent)
(process for preparing 6-chloro-2,5-dicarbonamidophenol compds. by N-acylation of alkyl(amino)benzoxazole derivs. followed by hydrolysis and N-acylation)

IT 13452-16-9P, 5-Chloro-2-methyl-6-nitrobenzoxazole
40703-40-0P, 5-Fluoro-2-methyl-6-nitrobenzoxazole 98121-18-7P,
2-[(4-Dodecyloxyphenyl)sulfonyl]butanoyl chloride 323579-00-6P,
6-Amino-5-chloro-2-methylbenzoxazole 851486-89-0P,
6-Amino-5,7-dichloro-2-methylbenzoxazole 851486-90-3P,
6-[(2-[(4-Dodecyloxyphenyl)sulfonyl]butanoyl)amino]-5,7-dichloro-2-methylbenzoxazole 851486-91-4P, 2,4-Dichloro-3-[(2-[(4-dodecyloxyphenyl)sulfonyl]butanoyl)amino]-6-aminophenol
851486-92-5P, 2,4-Dichloro-3-[(2-[(4-dodecyloxyphenyl)sulfonyl]butanoyl)amino]-6-(3,4-dichlorobenzoylamino)phenol 851486-93-6P,
6-Amino-5-fluoro-2-methylbenzoxazole 851486-94-7P,
6-Amino-7-chloro-5-fluoro-2-methylbenzoxazole 851486-95-8P,
6-[(2-[(4-Dodecyloxyphenyl)sulfonyl]butanoyl)amino]-7-chloro-5-fluoro-2-methylbenzoxazole 851486-96-9P, 6-Amino-2-chloro-3-[(2-[(4-dodecyloxyphenyl)sulfonyl]butanoyl)amino]-4-fluorophenol
851486-97-0P, 2-Chloro-3-[(2-[(4-dodecyloxyphenyl)sulfonyl]butanoyl)amino]-4-fluorophenol

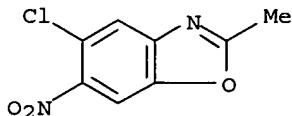
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(process for preparing 6-chloro-2,5-dicarbonamidophenol compds. by N-acylation of alkyl(amino)benzoxazole derivs. followed by hydrolysis

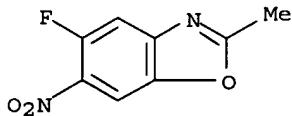
and N-acylation)

IT 13452-16-9P, 5-Chloro-2-methyl-6-nitrobenzoxazole
 40703-40-0P, 5-Fluoro-2-methyl-6-nitrobenzoxazole
 323579-00-6P, 6-Amino-5-chloro-2-methylbenzoxazole
 851486-89-0P, 6-Amino-5,7-dichloro-2-methylbenzoxazole
 851486-90-3P, 6-[[2-[(4-Dodecyloxyphenyl)sulfonyl]butanoyl]amino]-
 5,7-dichloro-2-methylbenzoxazole 851486-92-5P,
 2,4-Dichloro-3-[[2-[(4-dodecyloxyphenyl)sulfonyl]butanoyl]amino]-6-(3,4-
 dichlorobenzoylamino)phenol 851486-93-6P, 6-Amino-5-fluoro-2-
 methylbenzoxazole 851486-94-7P, 6-Amino-7-chloro-5-fluoro-2-
 methylbenzoxazole 851486-95-8P, 6-[[2-[(4-
 Dodecyloxyphenyl)sulfonyl]butanoyl]amino]-7-chloro-5-fluoro-2-
 methylbenzoxazole 851486-97-0P, 2-Chloro-3-[[2-[(4-
 dodecyloxyphenyl)sulfonyl]butanoyl]amino]-4-fluoro-6-(pivaloylamino)phenol
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (process for preparing 6-chloro-2,5-dicarbonamidophenol compds. by
 N-acylation of alkyl(amino)benzoxazole derivs. followed by hydrolysis
 and N-acylation)

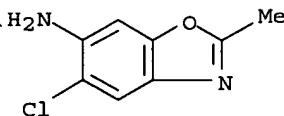
RN 13452-16-9 HCPLUS
 CN Benzoxazole, 5-chloro-2-methyl-6-nitro- (8CI, 9CI) (CA INDEX NAME)



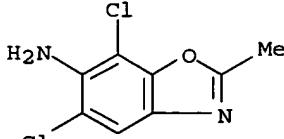
RN 40703-40-0 HCPLUS
 CN Benzoxazole, 5-fluoro-2-methyl-6-nitro- (9CI) (CA INDEX NAME)



RN 323579-00-6 HCPLUS
 CN 6-Benzoxazolamine, 5-chloro-2-methyl- (9CI) (CA INDEX NAME)

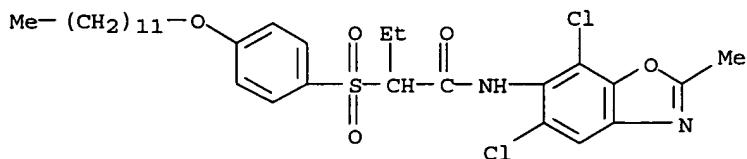


RN 851486-89-0 HCPLUS
 CN 6-Benzoxazolamine, 5,7-dichloro-2-methyl- (9CI) (CA INDEX NAME)



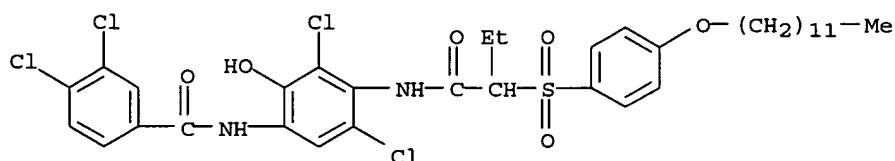
RN 851486-90-3 HCPLUS
 CN Butanamide, N-(5,7-dichloro-2-methyl-6-benzoxazolyl)-2-[[4-

(dodecyloxy)phenyl]sulfonyl] - (9CI) (CA INDEX NAME)



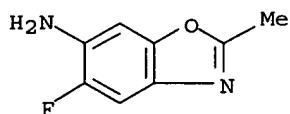
RN 851486-92-5 HCPLUS

CN Benzamide, 3,4-dichloro-N-[3,5-dichloro-4-[(2-[(4-(dodecyloxy)phenyl)sulfonyl]-1-oxobutyl)amino]-2-hydroxyphenyl] - (9CI) (CA INDEX NAME)



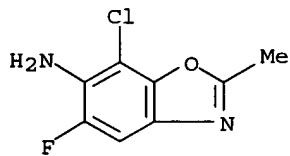
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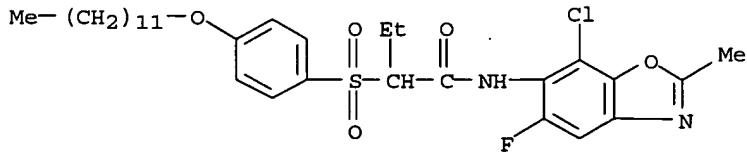
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CN 6-Benzoxazolamine, 7-chloro-5-fluoro-2-methyl- (9CI) (CA INDEX NAME)



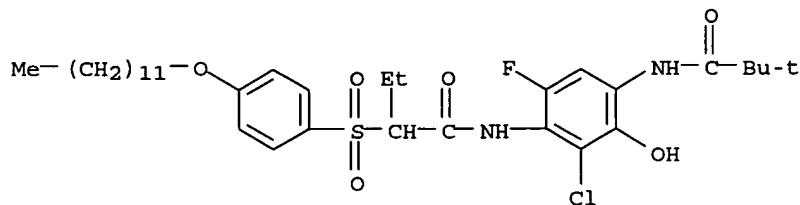
RN 851486-95-8 HCPLUS

CN Butanamide, N-(7-chloro-5-fluoro-2-methyl-6-benzoxazolyl)-2-[(4-(dodecyloxy)phenyl)sulfonyl] - (9CI) (CA INDEX NAME)



RN 851486-97-0 HCPLUS

CN Butanamide, N-[2-chloro-4-[(2,2-dimethyl-1-oxopropyl)amino]-6-fluoro-3-hydroxyphenyl]-2-[(4-(dodecyloxy)phenyl)sulfonyl] - (9CI) (CA INDEX NAME)



L24 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1967:2504 HCAPLUS
 DN 66:2504

ED Entered STN: 12 May 1984

TI Syntheses of heterocyclic compounds. XIV. Oxazoles from the pyrolysis of aryl azides in a mixture of a carboxylic and polyphosphoric acid
 AU Garner, Robert; Mullock, E. B.; Suschitzky, Hans
 CS Roy. Coll. Advan. Technol., Salford, UK
 SO Journal of the Chemical Society [Section] C: Organic (1966), (21), 1980-3
 CODEN: JSOOAX; ISSN: 0022-4952

DT Journal

LA English

CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))

GI For diagram(s), see printed CA Issue.

AB cf. CA 65, 15366b. Aromatic azides (I) with a para-substituent decompose thermally in a mixture of polyphosphoric and a carboxylic acid to give oxazoles (II), or in some cases N,O-diacyl o-aminophenols, in good yield. Various aspects of this nitrene mechanism are discussed. 18 references.

ST OXAZOLES BENZO; AZIDES; BENZOXAZOLES

IT Aryl azides

RL: RCT (Reactant); RACT (Reactant or reagent)
 (pyrolysis of)

IT 288-42-6D, Oxazole, derivs.

RL: RCT (Reactant); RACT (Reactant or reagent)
 (from azide pyrolysis)

IT 833-62-5P 5683-43-2P 13243-31-7P 13243-32-8P 13243-36-2P

13243-37-3P 13243-38-4P 13243-39-5P 13243-40-8P

13438-55-6P 13452-13-6P 13452-14-7P 13452-15-8P 13452-16-9P

13452-17-0P 13473-67-1P 14724-89-1P 15260-89-6P

34594-87-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

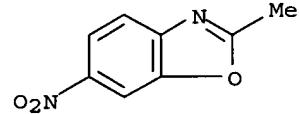
IT 5683-43-2P 13243-38-4P 13243-39-5P

13452-16-9P 13452-17-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

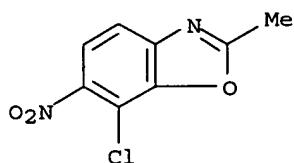
RN 5683-43-2 HCAPLUS

CN Benzoxazole, 2-methyl-6-nitro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

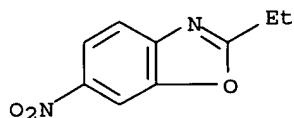


RN 13243-38-4 HCAPLUS

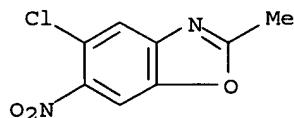
CN Benzoxazole, 7-chloro-2-methyl-6-nitro- (8CI) (CA INDEX NAME)



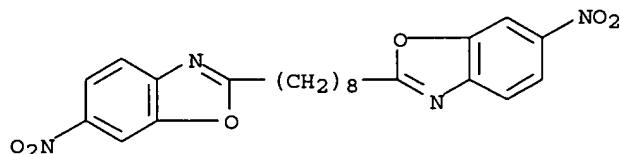
RN 13243-39-5 HCAPLUS
 CN Benzoxazole, 2-ethyl-6-nitro- (8CI) (CA INDEX NAME)



RN 13452-16-9 HCAPLUS
 CN Benzoxazole, 5-chloro-2-methyl-6-nitro- (8CI, 9CI) (CA INDEX NAME)



RN 13452-17-0 HCAPLUS
 CN Benzoxazole, 2,2'-octamethylenebis[6-nitro- (8CI) (CA INDEX NAME)



L24 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1953:41191 HCAPLUS
 DN 47:41191
 OREF 47:6894f-i,6895a-e
 ED Entered STN: 22 Apr 2001
 TI Quinone imides. XVIII. p-Quinonedipivalimides and their reactions
 AU Adams, Roger; Stewart, John M.
 CS Univ. of Illinois, Urbana
 SO Journal of the American Chemical Society (1952), 74, 3660-4
 CODEN: JACSAT; ISSN: 0002-7863
 DT Journal
 LA Unavailable
 CC 10 (Organic Chemistry)
 AB To 10.8 g. p-C6H4(NH2)2 (I) in 125 cc. pyridine was added slowly with stirring 25.3 g. Me3CCOCl (II) (obtained nearly quantitatively by refluxing the acid 1 hr. with excess SOCl2), and the mixture poured after 6 hrs. into excess HCl and ice to give 25.5 g. (93%) p-C6H4(NHCOCMe3)2, m. 283° (from dioxane). Similarly was prepared from 4.6 g. Ph3CCOCl (obtained by carbonation of Ph3CMgCl and treatment of the acid with SOCl2) in 20 cc. pyridine and 0.81 g. I in 10 cc. pyridine 4.5 g. (92.5%) p-C6H4(NHCOCPh3)2, m. 324-6° (from HCONMe2). I (5.0 g.) and 20 cc. CF3CO2H refluxed 7 hrs., and the mixture poured into 400 cc. dilute HCl

yielded 5.9 g. (38%) p -C₆H₄(NHCOCF₃)₂, m. 274° (from dioxane), which, refluxed with Pb(OAc)₄ in CHCl₃, tarry, amorphous products. A similar oxidation of p -C₆H₄(NH-COCCl₃)₂ gave a small yield of an unstable product. Equimolar amts. of N,N'-(*p*-phenylene)dipivalamides (III) and Pb(OAc)₄ refluxed 2 hrs. in dry CC₁₄ (25 cc./g. III) yielded the corresponding substituted N,N'-dipivalyl-*p*-quinone diimines [substituent, m.p., % yield given]: H (V), 164.5°, 84; 2-Cl (VI), 81-8.5°, 65; 2,6-Cl₂ (VII), 104.5-6.5°, 85; 2,5-Cl₂ (VIII), 159.5-60.5°, 80; 2,3-Cl₂ (IX), 138.5-9.5°, 75; 2,3,5-Cl₃ (X), 115.5°, 78 (all recrystd. from petr. ether), p -C₆H₄(NHCOCMe₃)₂ (0.83 g.) and an equivalent amount of Pb(OAc)₄ in Ac₂O stirred 24 hrs. at 70° and the mix decomposed with 500 cc. H₂O gave 31% 2,3,5,6-tetrachloro-IV, m. 200.5-1°. HCl passed into a petr. ether solution of the IV precipitated Cl-substituted III (substituent, m.p., and yield given): 2-Cl, 215°, 90; 2,6-Cl₂ (XI), 257°, 95, from VI; 2,3,5-Cl₃ (XII), m. 205-6° with rapid shrinking at 196°, 96% from VIII, 97% from IX, and 24% from VII (all from CHCl₃-petr. ether); and 2,3,5,6-Cl₄ (XIII), m. 335-5.5° (from CHCl₃), 44 yield together with 45% 2-tert-butyl-4,5,7-trichloro-6-(pivalylamino)benzoxazole, m. 225° (from aqueous EtOH), from X. V (0.69 g.) in 10 cc. glacial AcOH let stand 1 day at room temperature and poured into H₂O yielded 0.3 g. (36%) 2,1,4-AcOC₆H₃(NHCOCMe₃)₂ (XIV), needles, m. 156.5-7° (from CHCl₃). To 9.0 g. V added slowly with stirring and cooling 9 cc. 98% HCO₂H, and the mixture diluted with cold Et₂O yielded 8.5 g. (81%) 2,1,4-HCOC₆H₃(NHCOCMe₃)₂ (XV), platelets, m. 200-1° (from CHCl₃). XIV refluxed 30 min. with 10% aqueous NaOH gave 2,5-(Me₃CCONH)C₆H₃OH (XVI), needles, m. 248° (from petr. ether), also obtained in 90% yield by boiling 4.0 g. XV in 100 cc. (CH₂OH)₂ 5 min., or in 77% yield by alkaline hydrolysis of XV. XVI (0.30 g.) heated 15 min. at 250° and 100 mm. pressure and the cooled melt triturated with 15 cc. Et₂O yielded 0.18 g. (84%) 2-tert-butyl-6-(pivaloylamino)benzoxazole, platelets or needles, m. 164-5° (from Et₂O-petr. ether), hydrolyzed to XVI by refluxing 3 hrs. with 10% aqueous NaOH. The following Cl-substituted III (substituent given) were prepared from the corresponding Cl-substituted 1.2HCl salts and II in pyridine: 2,5-Cl₂, needles, m. 239-40° (from CHCl₃-petr. ether); 2,3-Cl₂, needles, 61%, m. 200-1° (from MeOH) [the free diamine, needles, m. 120.5-1° (from H₂O)]; XI, m. 256-7°, in poor yield. HCl passed 10 min. into 7.0 g. VII in 250 cc. petr. ether and the product chromatographed from 8 l. 3:1 petr. ether-Et₂O mixture on activated Al₂O₃ gave 24% XII and 33% 2-tert-butyl-5,7-dichloro-6-(pivalylamino)benzoxazole (XVII), needles, m. 165.5-7.5° (from petr. ether). Aqueous alkaline hydrolysis of XVII yielded 88% 2,4,3,6-Cl₂(Me₃CCONH)C₆H₃OH (XVIII), needles, m. 226° (from Et₂O-petr. ether). XVIII in (CH₂OH)₂ boiled 10 min. gave XVII. Cl passed into 2.0 g. XVI in 100 cc. glacial AcOH at 20° to a weight increase of 0.95 g., and the mixture E poured into 600 cc. cold H₂O gave XVIII. To 0.12 g. XVIII in 20 cc. H₂O and 0.5 cc. 5% aqueous NaOH was added with stirring 0.04 cc. Ac₂O to give 0.10 g. (83%) acetate of XVIII, m. 267-8° (from CHCl₃-petr. ether). IX (0.3 g.) in 5 cc. 98% HCO₂H let stand 0.5 hr. at room temperature, the red solution diluted with 75 cc. Et₂O, extracted with 100 cc. 5% aqueous NaOH, and the extract acidified with HCl yielded 0.2 g. (63%) 3,4,2,5-Cl₂(Me₃CCONH)C₆H₃OH, m. 190.5-1° (from CHCl₃-petr. ether). Similarly was prepared 3,6,2,5-Cl₂(Me₃CCONH)C₆H₃OH, 44%, m. 199.5-200.5° (from CHCl₃-petr. ether), from VIII. p -C₆C₁₄(NH₂)₂ (2.5 g.) and 2.5 g. II in 25 cc. pyridine refluxed 4.5 hrs. gave 4.0 g. (95%) XIII.

IT Quinone imines

IT Oxidation

(of N,N'-*p*-phenylenebis amides)

IT Propionamide, N,N'-(2,3-dichloro-3-5-hydroxy-*p*-phenylene)bis[2,2-dimethyl-
Propionamide, N,N'-(2,3-dichloro-5-5-hydroxy-*p*-phenylene)bis[2,2-dimethyl-
Propionamide, N,N'-(2,5-dichloro-3-5-hydroxy-*p*-phenylene)bis[2,2-dimethyl-
Propionamide, N,N'-(2,5-dichloro-5-5-hydroxy-*p*-phenylene)bis[2,2-dimethyl-
IT 859057-55-9, Propionamide, N,N'-(hydroxy-*p*-phenylene)bis[2,2-dimethyl-
(and esters)

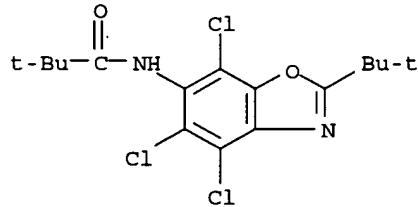
IT 4257-74-3, Acetamide, N,N'-*p*-phenylenebis[2,2,2-trichloro-

(oxidation of)

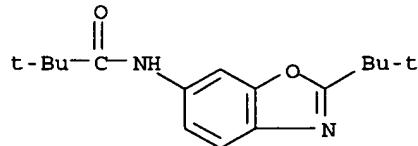
IT 404-28-4, Acetamide, N,N'-p-phenylenebis[2,2,2-trifluoro- 6068-70-8,
 Acetyl chloride, triphenyl- 6937-98-0, Propionamide,
 N,N'-p-phenylenebis[2,2-dimethyl- 41946-53-6, p-Phenylenediamine,
 2,3-dichloro- 313394-34-2, Propionamide, N,N'-(chloro-p-
 phenylene)bis[2,2-dimethyl- 854052-01-0, p-Benzoquinone diimine,
 2,3,5-trichloro-N,N'-dipivaloyl- 854052-02-1, p-Benzoquinone diimine,
 2,3,5,6-tetrachloro-N,N'-dipivaloyl- 854052-25-8, p-Benzoquinone
 diimine, 2-chloro-N,N'-dipivaloyl- 854053-46-6, p-Benzoquinone diimine,
 2,6-dichloro-N,N'-dipivaloyl- 854053-47-7, p-Benzoquinone diimine,
 2,5-dichloro-N,N'-dipivaloyl- 854053-48-8, p-Benzoquinone diimine,
 2,3-dichloro-N,N'-dipivaloyl- 854164-19-5, Benzoxazole,
 2-tert-butyl-4,5,7-trichloro-6-pivalamido- 854164-19-5,
 Propionamide, N-(2-tert-butyl-4,5,7-trichloro-6-benzoxazolyl)-2,2-dimethyl-
 854164-20-8, Benzoxazole, 2-tert-butyl-6-pivalamido-
 854164-20-8, Propionamide, N-2-tert-butyl-6-benzoxazolyl-2,2-
 dimethyl- 854164-22-0, Benzoxazole, 2-tert-butyl-5,7-dichloro-6-
 pivalamido- 854164-22-0, Propionamide, N-(2-tert-butyl-5,7-
 dichloro-6-benzoxazolyl)-2,2-dimethyl- 855464-56-1, p-Benzoquinone
 diimine, N,N'-dipivaloyl- 856985-71-2, Propionamide,
 N,N'-(2,6-dichloro-p-phenylene)bis[2,2-dimethyl- 856985-73-4,
 Propionamide, N,N'-(2,5-dichloro-p-phenylene)bis[2,2-dimethyl-
 856985-75-6, Propionamide, N,N'-(2,3-dichloro-p-phenylene)bis[2,2-dimethyl-
 856985-79-0, Propionamide, N,N'-(3,5-dichloro-2-hydroxy-p-
 phenylene)bis[2,2-dimethyl-, acetate 857231-91-5, Propionamide,
 N,N'-(trichloro-p-phenylene)bis[2,2-dimethyl- 857943-06-7, Propionamide,
 N,N'-(tetrachloro-p-phenylene)bis[2,2-dimethyl- 859301-32-9,
 Propionamide, N,N'-(3,5-dichloro-2-hydroxy-p-phenylene)bis[2,2-dimethyl-
 861058-90-4, Acetamide, N,N'-p-phenylenebis[2,2,2-triphenyl-
 (preparation of)

IT 854164-19-5, Benzoxazole, 2-tert-butyl-4,5,7-trichloro-6-
 pivalamido- 854164-20-8, Benzoxazole, 2-tert-butyl-6-pivalamido-
 854164-22-0, Benzoxazole, 2-tert-butyl-5,7-dichloro-6-pivalamido-
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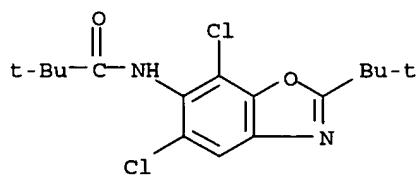
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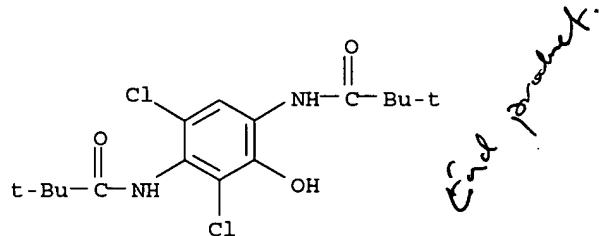
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RN 854164-22-0 HCAPLUS
 CN INDEX NAME NOT YET ASSIGNED



RN 859301-32-9 HCAPLUS
 CN Propionamide, N,N'-(3,5-dichloro-2-hydroxy-p-phenylene)bis[2,2-dimethyl-
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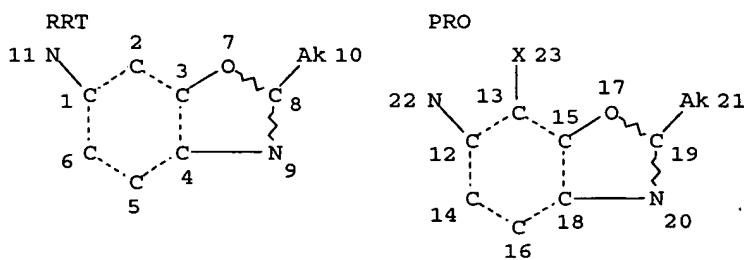
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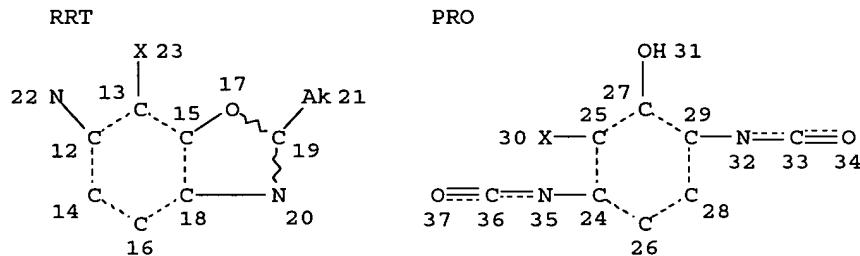
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